

**What is claimed is:**

1. A method for an IP phone switch to register an IP phone over an network, the IP phone having an unique address code within the network, comprising the steps of
  - 5 (a) associating a personal identification number with a directory number at the IP phone switch;
  - (b) establishing communications between the IP phone and the IP phone switch;
  - (c) receiving the address code of the IP phone and the personal  
10 identification number from the IP phone;
  - (d) authenticating the personal identification number; and
  - (e) associating the directory number with the address code for routing and switching call traffic to and from the IP phone.
- 15 2. The method of claim 1, wherein the directory number is a part of the personal identification number.
3. The method of claim 1, wherein the address code includes at least one of a Media Access Control address to the IP phone, an IP address to the IP phone, and set  
20 type of the IP phone.
4. The method of claim 1, wherein step (c) is repeated in the event that the personal identification number fails authentication in step (d).
- 25 5. The method of claim 4, further comprising a step to determine if step (d) has been repeated in excess a predetermined number of consecutive times due to the access code failing authentication and response sending a lock set command to the IP phone.
- 30 6. An IP phone switch, comprising
  - a database having personal identification numbers associated directory numbers;

a communications system for establishing communications between IP phones and the IP phone switch; and

an OAM for associating directory numbers with address codes of IP phones for routing and switching call traffic to and from the IP phones;

- 5        wherein, after communications is established between an IP phone and the IP phone switch, an address code and a personal identification number is send from the IP phone to the IP phone switch for registration of the IP phone, the address code and personal identification number is received by the communication system and passed to the OAM where the OAM authenticates the personal identification number with the
- 10       personal identification numbers in the database and then associates the directory number with the address code of IP phone for routing and switching call traffic to and from the IP phone.